Remarks

Claims 1-15 are pending. Claims 3-15 have been withdrawn pursuant to a restriction requirement. Claim 1 has been amended to page 9, line 19 to page 10, line 21 of the Specification.

The Examiner rejects claims 1 and 2 under 35 U.S.C. 112(2) as being indefinite. The Examiner objects to the terms "5- or 6-membered heterocyclic ring", "heteroaryloxy" and "heteroaryl". The Examiner states that the ring structures and placement is indefinite. In response, Applicants have inserted specific structure names. The Examiner also objects to the reference to "substituted" without naming any substituents. The term "substituted" has been deleted. The Examiner objects to the use of "can be". The phrase has been eliminated throughout claims 1 and 2. Applicants submit that the above amendments address each of the Examiner's objections to claims 1 and 2.

The Examiner rejects claims 1 and 2 under 35 U.S.C. 102 as being anticipated by, or in the alternative, being unpatentable in view of published PCT application WO 00/24736 ("WO '736"). Applicants respectfully traverse this rejection. WO '736 was published in May 2000, whereas the instant application has a priority date of March 1999. Applicants enclose a certified translation of the priority document to overcome this rejection. Applicants submit that the instant application is now in condition for allowance.

Respectfully submitted,

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SEP 21 2001

Amended Claims with underlining and bracketing

1. **(am nded)** A compound of the formula A compound of the formula (Ia), (Ib) or (Ic)

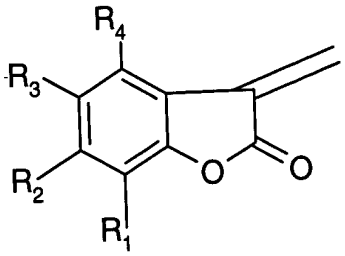
$Q_1{=}X_1$ $Q_1{=}X_2{=}Q_1$ $Q_1{=}X_2{=}Q_2$

(Ia) (Ib) (Ic)

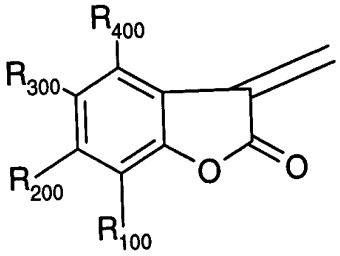
in which

Q_1 is a benzofuran-2-one of the formula (IIa), and

Q_2 is a benzofuran-2-one of the formula (IIb)



(IIa)



(IIb)

in which

R_1, R_2, R_3, R_4, R_{100}, R_{200}, R_{300} or R_{400} independently of one another are hydrogen, halogen, hydroxyl, cyano, ether, nitro, an amine, amide, imine, urethane, sulfonamide, ester, carboxylic acid or sulfonic acid radical or carboxylic salt, sulfonic salt or ~~[substituted or unsubstituted]~~ C_1-C_{24}alkyl, C_1-C_{24}alkoxy, C_1-C_{24}alkylthio, C_5-C_{12}cycloalkyl, C_5-C_{12}cycloalkoxy, C_5-C_{12}cycloalkylthio, C_2-C_{24}alkenyl, C_6-C_{24}aryl, C_7-C_{25}aralkyl, C_6-C_{24}aryloxy, C_6-C_{24}arylthio, ~~[A_5-A_{18}heteroaryl, A_5-A_{18}heteroaryloxy or A_5-A_{18}heteroarylthio,]~~ thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl, O-thienyl, O-benzo[b]thienyl, O-dibenzo[b,d]thienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiinyl, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizinyl, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinolizinyl, O-quinolyl, O-isoquinolyl, O-phthalazinyl, O-naphthyridinyl, O-quinoxalinyl, O-quinazolinyl, O-cinnolinyl, O-pteridinyl, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-

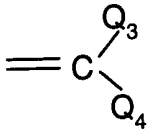
benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl, S-thienyl, S-benzo[b]thienyl, S-dibenzo[b,d]thienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiinyl, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indolizinyl, S-isoindolyl, S-indolyl, S-indazolyl, S-purinyl, S-quinolizinyl, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxalinyl, S-quinazolinyl, S-cinnolinyl, S-pteridinyl, S-carbazolyl, S-carbolinyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

or

R_1 and R_2, R_2 and R_3, R_3 and R_4 or R_{100} and R_{200}, or R_{200} and R_{300}, R_{300} and R_{400}, independently of one another in each case together are divalent ~~[, substituted or unsubstituted]~~ radicals, such as polycyclic radicals or 1,3-butadien-1,4-ylene or -CH=CH-NH-, the two last radicals forming an additional fused-on 5- or 6-membered ring, and

X_1 is a hydrazone or imine radical, with the proviso that, if R_1, R_2, R_3 and R_4 are hydrogen, or at least one R_1, R_2, R_3 or R_4 is methyl, the hydrazone radical is excluded, or, if R_1, R_2, R_3 or R_4 is hydrogen, X_1 is not phenylimine- or 4-dimethylamine-phenylimine,

or X_1 is a methylene radical,



in which

Q_3 is a ~~[substituted or unsubstituted]~~ primary or secondary amine radical and Q_4 is hydrogen or ~~[a substituted or unsubstituted]~~ C_1-C_{24}alkyl,

-CO-(C_1-C_{24}alkyl), -CO-O-(C_1-C_{24}alkyl), C_1-C_{24}alkoxy, C_1-C_{24}alkylthio,

C_5-C_{12}cycloalkyl, C_5-C_{12}cycloalkoxy, C_5-C_{12}cycloalkylthio, C_2-C_{24} alkenyl,

C_6-C_{24}aryl, -CO-O-(C_6-C_{24}aryl), -CO-(C_6-C_{24}aryl), C_6-C_{24}aryloxy, a primary or secondary amine radical, C_6-C_{12}arylthio, C_7-C_{25}aralkyl, ~~[A_5-A_{18}heteroaryl, A_5-A_{18}heteroaryloxy or A_5-A_{18}heteroarylthio,]~~ thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl,

phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl O-thienyl, O-benzo[b]thienyl, O-dibenzo[b,d]thienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiinyl, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizinyl, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinolizinyl, O-quinolyl, O-isoquinolyl, O-phthalazinyl, O-naphthyridinyl, O-quinoxalinyl, O-quinazolinyl, O-cinnolinyl, O-pteridinyl, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl S-thienyl, S-benzo[b]thienyl, S-dibenzo[b,d]thienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiinyl, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indolizinyl, S-isoindolyl, S-indolyl, S-indazolyl, S-purinyl, S-quinolizinyl, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxalinyl, S-quinazolinyl, S-cinnolinyl, S-pteridinyl, S-carbazolyl, S-carbolinyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

or

Q_3 and Q_4 together are a lactam, quinomethylene, hydantoin, acenaphthenequinone, azlactone, pyrazolonyl, barbituric acid, isoindolinone or isoindoline radical,

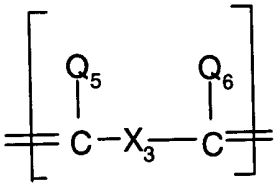
with the proviso that

Q_4 is not hydrogen and Q_3 is not a primary or secondary amine radical if R_3 is hydrogen, methoxy or hydroxyl and R_1, R_2 and R_4 are hydrogen,

~~[or Q_4 is not hydrogen and Q_3 is not a secondary amine radical if R_1, R_2, R_3 and R_4 are hydrogen,]~~

and

X_2 is ~~[a tetravalent 5- or 6-membered heterocyclic ring]~~ thienyl, furyl, 2H-pyranyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, triazinyl, pyrazinyl, pyridazinyl, morpholin, piperidyl, piperazinyl, or is



in which

X_3 is a single bond, ~~[unsubstituted or substituted]~~ C_6-C_{24}arylene, ~~[A_5-A_{18}heteroarylene,]~~ thienylene, benzo[b]thienylene, dibenzo[b,d]thienylene, thianthrenylene, furylene, furfurylene, 2H-pyranylene, benzofuranylene, isobenzofuranylene, dibenzofuranylene, phenoxythinylene, pyrrolylene, imidazolylene, pyrazolylene, pyridylene, bipyridylene, benzimidazolylene, benzothiazolylene, triazinylene, pyrimidinylene, pyrazinylene, pyridazinylene, indolizinylene, isoindolylene, indolylene, indazolylene, purinylene, quinolizinylene, quinolylene, isoquinolylene, phthalazinylene, naphthyridinylene, quinoxalinylene, quinazolinylene, cinnolinylene, pteridinylene, carbazolylene, carbolinylene, benzotriazolylene, benzoxazolylene, phenanthridinylene, acridinylene, perimidinylene, phenanthrolinylene, phenazinylene, isothiazolylene, phenothiazinylene, isoxazolylene, furazanylene or phenoxazinylene 1,2-phenylene, 1,3-phenylene, 1,4-phenylene or naphthylene, or a tetravalent polyether, polyimine, polyamine radical, or bi(C_6-C_{24})arylene, ~~[bi(A_5-A_{18})heteroarylene,]~~ bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen, C_2-C_{24}alkenylene, in which bi(C_6-C_{24})arylene, ~~[bi(A_5-A_{18})heteroarylene]~~ bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen or C_2-C_{24}alkenylene ~~[can be]~~ are optionally interrupted by one or more intermediate units ~~[such as]~~ selected from the group consisting of -CH=CH-, -CH=N-, -N=N-, -$CR_{44}R_{42}$-, -CO-, -COO-, -OCO-, -NR_{42}CO-, -$CONR_{42}$-, -O-, -S-, -SO-, -SO_2- or -NR_{42}-,

in which

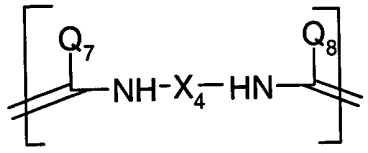
R_{42} and R_{44} independently of one another are hydrogen, ~~[substituted or unsubstituted]~~ C_1-C_{24}alkyl, C_5-C_{12}cycloalkyl, C_2-C_{24} alkenyl, C_6-C_{24}aryl, C_7-C_{25}aralkyl or ~~[A_5-A_{18}heteroaryl]~~ thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl,

with the proviso that if R_1, R_2, R_3, R_4, R_{100}, R_{200}, R_{300}, R_{400} are all tert-butyl or all hydrogen, Q_5 and Q_6 are hydrogen, X_3 is not 1,4-phenylene, and

Q_5 and Q_6 independently of one another are hydrogen, C_6-C_{24}aryl, C_6-C_{24}aryloxy, C_1-C_{24}alkyl, C_1-C_{24}alkoxy, C_1-C_{24}alkylthio, C_5-C_{12}cycloalkyl, C_5-C_{12}cycloalkoxy, C_5-C_{12}cycloalkylthio, C_2-C_{24}alkenyl, C_6-C_{24}aryl, C_6-C_{24}aryloxy, C_6-C_{24}arylthio ~~[or A_5-A_{18}heteroaryl, A_5-A_{18}heteroaryloxy, A_5-A_{18}heteroarylthio]~~, thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl,

indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl O-thienyl, O-benzo[b]thienyl, O-dibenzo[b,d]thienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiinyl, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizinyl, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinolizinyl, O-quinolyl, O-isoquinolyl, O-phthalazinyl, O-naphthyridinyl, O-quinoxalinyl, O-quinazolinyl, O-cinnolinyl, O-pteridinyl, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl S-thienyl, S-benzo[b]thienyl, S-dibenzo[b,d]thienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiinyl, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indolizinyl, S-isoindolyl, S-indolyl, S-indazolyl, S-purinyl, S-quinolizinyl, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxalinyl, S-quinazolinyl, S-cinnolinyl, S-pteridinyl, S-carbazolyl, S-carbolinyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

or

X_2 is 

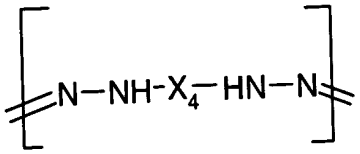
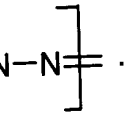
in which

Q_7 and Q_8 independently of one another are Q_5 or Q_6, and

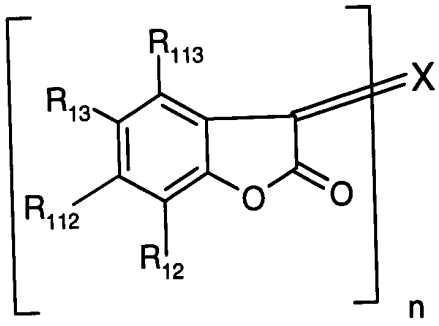
X_4 is C_6-C_{24}arylene, A_5-A_{18}heteroarylene,a polymethylidene or divalent polyether, polyimine, polyamine radical, or bi(C_6-C_{24})arylene, ~~[bi(A_5-A_{18})heteroarylene,]~~ bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen C_2-C_{24}alkenylene, in which bi(C_6-C_{24})arylene~~[, bi(A_5-A_{18})heteroarylene]~~ bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen or C_2-C_{24}alkenylene ~~[can be]~~ are optionally interrupted by one or more intermediate units ~~[such as]~~ selected from the group consisting of

-CH=CH-, -CH=N-, -N=N-, -$CR_{44}R_{42}$-, -CO-, -COO-, -OCO-, -NR_{42}CO-, -$CONR_{42}$-, -O-, -S-, -SO-, -SO_2- or -NR_{42}-,

or

X_2 is  or  .

2. **(amended)** A compound according to claim 1 of the formula (XVI)



(XVI)

in which

n is 1 or 2, and

if n is 1

X is X_1 as defined in claim 1, and

if n is 2

X is X_2 as defined in claim 1, and

R_{12}, R_{112}, R_{13} and R_{113} independently of one another are hydrogen, halogen, OH, NO_2, R_{14}, OR_{14}, OC_9-C_{18}alkyl or SC_9-C_{18}alkyl, in which

R_{14} is C_1-C_{24}alkyl which is unsubstituted or substituted one or more times by oxo or by $COO^-X_5^+$ and which ~~[can be]~~ is uninterrupted or interrupted one or more times by O, N and/or S, or is C_7-C_{18}aralkyl or C_6-C_{12}aryl unsubstituted or substituted one or more times by halogen, OR_{16}, $NR_{16}R_{17}$, $COOR_{16}$, $CONR_{16}R_{17}$, $NR_{18}COR_{16}$ or $NR_{18}COOR_{16}$,

X_5^+ is a cation H^+, Na^+, K^+, $Mg^{++}{}_{1/2}$, $Ca^{++}{}_{1/2}$, $Zn^{++}{}_{1/2}$, $Al^{+++}{}_{1/3}$, or $(NR_{16}R_{17}R_{18}R_{19})^+$, and

R_{16} and R_{17} independently of one another are hydrogen, C_6-C_{12}aryl, C_7-C_{10}aralkyl, or C_1-C_8alkyl which is unsubstituted or substituted one or more times by halogen, hydroxyl or C_1-C_4alkoxy, or

R_{16} and R_{17} in $NR_{16}R_{17}$ or $CONR_{16}R_{17}$, together with the nitrogen atom connecting them, are pyrrolidine, piperidine, piperazine or morpholine each of which is unsubstituted or substituted

from one to four times by C_1-C_4alkyl,

and

R_{18} and R_{19} independently of one another are hydrogen, C_1-C_8alkyl, C_6-C_{10}aryl or C_6-C_{12}aralkyl, or R_{12} and R_{112}, R_{112} and R_{13}, R_{13} and R_{113} ~~[can also]~~ independently of one another are each together ~~[be]~~ divalent ~~[substituted or unsubstituted]~~ radicals~~, such as polycyclic radicals~~.